

Serial No. 10/549,814
Amendment
Responsive to Office Action dated October 21, 2008

KAS-263

REMARKS

Pending Claims

Claims 1-4 are pending. Claims 5-15 have been canceled without prejudice or disclaimer. Claims 1-4 have been amended. No new matter has been added.

Claim Rejections Under 35 U.S.C. §102

Claims 1-15 are rejected under 35 U.S.C. §102(b) as being anticipated by JP 2000-297443.

Applicants request reconsideration of the rejection in view of the foregoing amendments and for the following reasons. In particular, applicants have canceled claims 5-15 and have amended claims 1-4. As amended, claims 1-4 are patentable over JP '443 and the remainder of the art of record.

According to the embodiments of the present invention, the results of various sensors 40, etc. are displayed in a cab 14 for observation by the operator. Figure 3 shows cab 14 having the display 50 on which the results are displayed. An initial screen 100 that is shown in Figure 5 is displayed on display 50, which includes a basic data display area 50A and an alarm/failure display area 50B.

Figure 9 shows the process of providing the initial screen 100 on display unit 50. A screen display control unit 2G (Figure 8) has the function of controlling layout of the entire screen on the display unit 50. See page 32, lines 14-16 of the Specification. According to the

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flow chart of Figure 9, and with reference to Figure 10, the alarm-display-side screen shift function of screen display control unit 2G controls the display of the alarm screens. For example, when the input button 51B of keypad 51 (Figure 6) is pressed by an operator, referring to Figure 10, the list of alarms occurring at that time are displayed in alarm list screen 101. If the operator further depresses the button 51A of the keypad 51 (Figure 6), then the display processing proceeds to display screen 102, which displays detailed information.

By looking at detailed information screen 102, the operator can understand the type of alarm that has issued and the occurrence location of the selected alarm being displayed. Further, if the button 51B of the keypad 51 is pressed, the display processing continues to display the circuit diagram screen 103, providing even more information regarding the alarm being displayed. Similar screen displays are provided to the operator in the event of a failure, including a failure list display screen 14, etc. as shown in Fig. 11 and described in the specification. Accordingly, when an alarm mark or failure condition code is displayed in the screen display 50B, the operator controls whether the screen that is displayed regarding the alarm/failure condition is changed from an initial screen to a screen that is concerned with the alarm/failure condition, for example the alarm/failure list screens 101, 104 shown in Figures 10 and 11, respectively, which are only displayed after the operator inputs the appropriate input to the keypad 51.

Applicants have amended the claims to set forth a display unit for displaying the usual screen having a basic data display area, an alarm display area for displaying a preset alarm mark related to details of an alarm and a failure display area for displaying a preset failure

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code related to details of a failure. Further, claim 1 sets forth a basic data display control unit, an alarm display control unit and a failure display control unit. The alarm display and failure display control units display the alarm mark and the failure code on the corresponding alarm/failure display area, respectively, without shifting the display of the usual screen. Further, a screen display control unit, as set forth in claim 1, shifts the usual screen displayed in the display unit, in response to manipulation by an operator, to an alarm list screen for displaying a list of current and past alarms, or to a failure list screen for displaying a list of current and past failures.

In JP '443, the alarm or failure information is sent from an information management controller 1 to an information management monitor 2 and the monitor automatically transits to the irregularity screen 62. The automatic change to the irregularity screen 62 occurs regardless of which screen of operation the display is currently in. Also, as set forth in paragraph [390] of the reference, it is disclosed that the irregularity screen 62 is displayed alternately at predetermined intervals.

It is an object in the operation of a construction machine to reduce the downtime by presenting the location, cause and signs of an abnormality to the operator in a manner that enables the operator to efficiently clear the cause of the alarm/failure or shut down the operation of the machine. Accordingly, when an alarm or failure occurs, the operator makes a judgment during the operation of the construction machine as to whether the hydraulic excavator is to continue or stop its operation. This requires determining the occurrence of an abnormality and the factors causing the failure or alarm signals to be generated. In JP '443,

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the display of the usual screen which the operator views to determine the state of operation of the excavation machine is automatically shifted to an irregularity screen without enabling control of the display by operator manipulation in response to the alarm/failure condition. This creates a burden on the operator and the efficient operation of the excavation machine, as a result.

According to the embodiments of the present invention, the alarm/failure display control units respectively output a display signal for displaying a corresponding alarm/failure to the failure display area of the usual screen so as to display an alarm mark or preset failure code related to the details of the alarm or failure in the failure display area 50B of the display 50. However, unless the screen shift operation is specifically input by the operator according to the embodiments of the invention, the usual screen is not shifted. This prevents the operator from becoming annoyed by the alarm/failure indications and ensures quick resolution of the alarm condition or failure condition that is displayed in the alarm display area or failure display area of the usual screen.

JP '443 does not disclose or suggest the combination set forth in amended claims 1-4, and therefore the rejection under 35 U.S.C. §102(b) should be withdrawn. Further, applicants have considered the remainder of the art of record and none of the references, whether considered individually or in combination with JP '443, suggest the combination now claimed by applicants. Accordingly, reconsideration and withdrawal of the rejection are respectfully requested.

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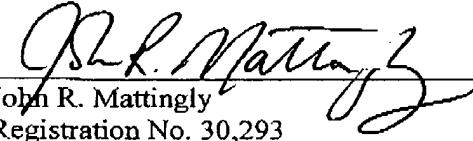
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Conclusion

In view of the foregoing, Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

Respectfully submitted,

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